Facilitating Teaching-focused Professional Development among Postdocs

Annual Meeting of the National Postdoctoral Association
University of Maryland, Baltimore
March 13, 2015

Julia Savoy¹, Mark Connolly¹, Lucas Hill², and You-Geon Lee¹
¹University of Wisconsin-Madison
²Michigan State University
Workshop Agenda

Welcome, Introduction, and Overview

Part I: The Longitudinal Study of Future STEM Scholars (LSFSS)
  Study Overview
  Career Trajectories and Work Life Experiences of Postdocs in the LSFSS

Questions and Discussion

Part II: STEM College Teaching Proficiency Self-Assessment Tool
  Overview of the Tool
  Using the Tool to Facilitate Teaching-focused Professional Development
  Small Group Discussions
  Large Group Report-Out

Conclusion
Acknowledgments

National Science Foundation
Wisconsin Center for Education Research
Jessica Grettie, *LSFSS* Project Manager
Jennifer Vandenberg, *LSFSS* Undergraduate Assistant
Anh Dang, *LSFSS* Undergraduate Assistant

This material is based on work supported by the National Science Foundation under Grant No. 0817537. The Longitudinal Study of Future STEM Scholars is housed within the Wisconsin Center for Education Research in the School of Education at the University of Wisconsin-Madison.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.
Project Background and Purpose

• Improving undergraduate STEM education is a national priority
• Better preparing future STEM scholars during their doctoral and early-career positions is one way to achieve this improvement
• Although approximately 1/3 of STEM Ph.D.’s will teach undergraduates, doctoral training programs heavily emphasize students’ research preparation
• STEM Ph.D.’s who teach undergraduates often have insufficient pedagogical training and are underprepared for this role
• The LSFSS explores the short- and long-term impact of teaching-focused professional development (TFPD) on STEM doctoral students and early-career academics using a longitudinal, mixed-methods approach
## Project Research Questions

<table>
<thead>
<tr>
<th>Primary Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does participation in teaching-focused professional development (TFPD) affect STEM doctoral students’ teaching preparation, career pathways, and early-career performance?</td>
</tr>
</tbody>
</table>

### TFPD Program Description & Design

1. What are the variations of TFPD programs for STEM doctoral students?
2. What elements should be considered in designing and evaluating TFPD programs?

### TFPD Program Participation

3. Who participates in TFPD programs, and why?

### TFPD Program Impacts

4. What influence does participation in TFPD programs have on the kinds of careers that STEM Ph.D.’s pursue and ultimately choose?
5. What skills and knowledge do STEM doctoral students gain from TFPD programs that help prepare them for a diverse range of academic careers?
6. What influence, if any, does participation in TFPD have on indicators of early-career performance (e.g., satisfaction, peer and student feedback, use of research-based instructional approaches) as academics?
Since 2009, the LSFSS has followed a panel of late-stage STEM doctoral students from three institutions (initial $N = 3,060$)

- Arizona State University
- University of Washington-Seattle
- University of Wisconsin-Madison

- Combination of surveys (Years 1, 3, and 5) and interviews (Years 2 and 3)

<table>
<thead>
<tr>
<th>Year</th>
<th>Collection Method</th>
<th>Sample Frame</th>
<th>Responses</th>
<th>Rate</th>
<th>Primary Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1 (2009)</td>
<td>Survey</td>
<td>3,060</td>
<td>2,163</td>
<td>73%</td>
<td>TFPD participation and experiences</td>
</tr>
<tr>
<td>Years 2, 3 (2010-2011)</td>
<td>Interviews</td>
<td>--</td>
<td>75</td>
<td>--</td>
<td>TFPD experiences and career transitions, with emphasis on values, expectations, and priorities</td>
</tr>
<tr>
<td>Year 3 (2011)</td>
<td>Survey</td>
<td>2,146</td>
<td>1,445</td>
<td>67%</td>
<td>TFPD impact on teaching self-efficacy beliefs; current employment</td>
</tr>
<tr>
<td>Year 5 (2013)</td>
<td>Survey</td>
<td>2,146</td>
<td>1,414</td>
<td>66%</td>
<td>TFPD impact on teaching self-efficacy and behaviors as early-career professionals; career trajectories</td>
</tr>
</tbody>
</table>
Doctoral Student Participation in TFPD

- Factors that most encourage TFPD participation
  - departmental requirements
  - interest in teaching and learning
  - career goals

- Factors that most discourage TFPD participation
  - lack of awareness of programs
  - scheduling conflicts with TFPD events
  - seeing TFPD as a lower priority

- Women engage in TFPD programs at a higher rate than men
Effects of TFPD for Doctoral Students

- TFPD positively affects participant’s beliefs about ability to teach undergraduates
- TFPD positively influences certain teaching competencies (e.g., course design, assessment of student learning)
- TFPD participants learn high-impact instructional practices that they apply in their early careers
- Women TFPD participants develop identity as teacher-scholars and make connections beyond departments
- TFPD participation and actual teaching experience play equally important, complementary roles in shaping early-career beliefs and skills
Influence of TFPD on Career Trajectories

- While in doctoral programs, students experience the “three-way mismatch”
  - Expectations of graduate school,
  - Actual training experiences, and
  - Career interests and opportunities

- TFPD activities help participants clarify career interests and successfully compete for a wider variety of jobs
Ongoing *LSFSS* Analyses, Intended Audiences

- In the seventh and final year of the study, we plan to analyze
  - Influence of TFPD on doctoral time to degree
  - Influence of TFPD on post-Ph.D. employment
  - Long-term effects of TFPD on self-efficacy
  - Effects of TFPD on teaching behaviors in early-career academics

- We plan to share our findings and research tools broadly
  - Departments, units, and organizations that deliver TFPD for doctoral students and postdocs
  - Deans, directors, and chairs of STEM departments and colleges
  - Graduate school deans and administrators
  - Current and prospective STEM doctoral students
  - STEM faculty, especially those with advising responsibilities
  - Funding agencies
  - National policy and advocacy organizations
  - Education researchers
Postdocs in the *LSFSS* Sample: Major Questions

- Demographics
- How many postdoc appointments did our participants have, and how long were they in postdoc positions overall?
- Where did postdocs go after a two year period?
- To what extent are postdocs teaching in what is ostensibly a research training position?
- How much TFPD did participants engage in during their postdoc positions?
- How confident are postdocs in their ability to use specific STEM college teaching practices?
- How often do postdocs use specific STEM teaching practices?
# Gender, Race, and Citizenship

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th>Year 3</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>(%)</td>
</tr>
<tr>
<td><strong>All survey respondents</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>226 (52.0%)</td>
<td>201 (51.8%)</td>
</tr>
<tr>
<td>Female</td>
<td>209 (48.0%)</td>
<td>187 (48.2%)</td>
</tr>
<tr>
<td>Race and Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>319 (73.8%)</td>
<td>300 (77.7%)</td>
</tr>
<tr>
<td>Asian</td>
<td>78 (18.1%)**</td>
<td>63 (16.3%)</td>
</tr>
<tr>
<td>Other URM</td>
<td>35 (8.1%)</td>
<td>23 (6.0%)</td>
</tr>
<tr>
<td>Citizenship Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Citizen</td>
<td>337 (77.3%)</td>
<td>319 (82.2%)</td>
</tr>
<tr>
<td>U.S. Perm. Resident/Other</td>
<td>99 (22.7%)</td>
<td>69 (17.8%)</td>
</tr>
</tbody>
</table>
## Disciplinary Representation, Broad Categories

<table>
<thead>
<tr>
<th>Disciplinary Category (NSF)</th>
<th>Year 3 n (%)</th>
<th>Year 5 n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Sciences</td>
<td>186 (42.5%)***</td>
<td>223 (57.3%)</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>148 (33.8%)***</td>
<td>120 (30.9%)</td>
</tr>
<tr>
<td>Engineering</td>
<td>47 (10.7%)</td>
<td>18 (4.6%)</td>
</tr>
<tr>
<td>Psychology and Social Sciences</td>
<td>37 (8.5%)</td>
<td>18 (4.6%)</td>
</tr>
<tr>
<td>Other</td>
<td>20 (4.6%)</td>
<td>10 (2.6%)</td>
</tr>
</tbody>
</table>
## Cohort by Degree Completion Year; Institutions

<table>
<thead>
<tr>
<th>Graduation Year</th>
<th>Year 3 n (%)</th>
<th>Year 5 n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cohort 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>159 (32.9%)</td>
<td>87 (22.3%)</td>
</tr>
<tr>
<td>2010</td>
<td>162 (40.3%)</td>
<td>112 (28.6%)</td>
</tr>
<tr>
<td><strong>Cohort 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>32 (11.6%)</td>
<td>114 (29.2%)</td>
</tr>
<tr>
<td>2012</td>
<td>--</td>
<td>58 (14.8%)</td>
</tr>
<tr>
<td>2013</td>
<td>--</td>
<td>20 (5.1%)</td>
</tr>
</tbody>
</table>

- In both Year 3 and Year 5, our postdocs were primarily at doctoral granting institutions (63% and 54%, respectively)
- Other areas of strong representation included medical schools, university-affiliated research centers or institutes, and government.
Number of Postdoc Positions

- The vast majority (78.2%) of our respondents had a single postdoc appointment by the time of the Year 5 survey

- Another 19.3% had a second postdoc position

- Only 20 (the remaining 2.4%) had a third or fourth postdoc appointment

- No differences found by gender, race and ethnicity, citizenship, or discipline in terms of number of postdocs

- Same results with regard to the length of the postdoc positions: no differences by group membership
LSFSS Postdoc Experiences:
Career Trajectories

Postdoc Appointment Length, Cohort 1

One Postdoc Position Only
- 12 months: 9%
- 13-24 months: 17%
- 25-36 months: 21%
- 37-48 months: 29%
- 49-60 months: 0%
- 61-72 months: 0%
- 73-84 months: 2%
- 85+ months: 1%

Two Postdoc Positions
- 1-12 months: 2%
- 13-24 months: 1%
- 25-36 months: 19%
- 37-48 months: 21%
- 49-60 months: 29%
- 61-72 months: 21%
- 73-84 months: 19%
- 85+ months: 8%
Postdoc Appointment Length, Cohort 1, Continued

Three or More Postdoc Positions

- 25-36 months: 8%
- 37-48 months: 8%
- 49-60 months: 17%
- 61-72 months: 25%
- 85+ months: 42%
LSFSS Postdoc Experiences: Career Trajectories

Postdoc Appointment Length, All Respondents

One Postdoc Position Only

- 1-12 months: 0%
- 13-24 months: 6%
- 25-36 months: 15%
- 37-48 months: 28%
- 49-60 months: 21%
- 61-72 months: 29%
- 73-84 months: 23%
- 85+ months: 2%

Two Postdoc Positions

- 1-12 months: 1%
- 13-24 months: 1%
- 25-36 months: 10%
- 37-48 months: 23%
- 49-60 months: 28%
- 61-72 months: 20%
- 73-84 months: 15%
- 85+ months: 2%
Postdoc Appointment Length, All Respondents, Continued

Three or More Postdoc Positions
Career Pathways: Cohort 1 in Year 5 (2013)

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th>Postdoc</th>
<th>Tenure-Track Faculty</th>
<th>Non-Tenure-Track Faculty</th>
<th>Others in Academia</th>
<th>Others Outside of Academia</th>
<th>Unemployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>All survey respondents</td>
<td>163 (45.8%)</td>
<td>64 (18.0%)</td>
<td>21 (5.9%)</td>
<td>20 (5.6%)</td>
<td>73 (20.1%)</td>
<td>15 (4.2%)</td>
</tr>
</tbody>
</table>

- Among those who, in Year 3 had been a postdoc, nearly half were still in that position in Year 5
- 18% were tenure-track faculty
- One-fifth had moved to positions in industry
### Teaching During Postdoc Appointments, Year 5 (2013)

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th>Any Teaching ( n (%) )</th>
<th>Teaching Undergraduates ( n (%) )</th>
<th>Teach Graduate Students ( n (%) )</th>
<th>Teach Undergraduates and Graduate Students ( n (%) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Postdocs</td>
<td>514 (62.9%)</td>
<td>404 (49.5%)</td>
<td>332 (40.6%)</td>
<td>46 (13.9%)</td>
</tr>
</tbody>
</table>

- No gender differences in teaching participation
- White postdocs were overrepresented as teachers of undergraduates, while Asian and Asian American postdocs were underrepresented
- U.S. Citizens were also overrepresented; heavy overlap between Asian and Asian American group and those who are permanent resident and other
### Teaching Undergraduates During Postdoc Appointments, Year 5 (2013)

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th>Instructor of Record</th>
<th>Research Mentor</th>
<th>Guest Lecturer</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>m (SD)</td>
<td>n (%)</td>
<td>m (SD)</td>
</tr>
<tr>
<td>All Postdocs</td>
<td>126 (31.3%)</td>
<td>4.4 (3.3)</td>
<td>311 (77.4%)</td>
<td>1.6 (1.3)</td>
</tr>
</tbody>
</table>

- No gender differences in teaching participation by role
- No citizenship differences
- By race and ethnicity, other underrepresented minority postdocs were significantly more likely to serve as a research mentor to undergraduates
TFPD During Postdoc Appointments, Year 5 (2013)

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th>Formal Courses</th>
<th>In-Depth Workshop</th>
<th>Brief Workshop</th>
<th>Talk or Presentation</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>m (SD)</td>
<td>n (%)</td>
<td>m (SD)</td>
<td>n (%)</td>
</tr>
<tr>
<td>All Postdocs</td>
<td>41 (17.7)</td>
<td>1.5 (0.8)</td>
<td>66 (28.5%)</td>
<td>1.7 (1.3)</td>
<td>121 (52.2%)</td>
</tr>
</tbody>
</table>

- The first column in each type represents participation in a TFPD program type; the second column represents the mean number of each event. For example, ~18% of postdocs participated in an average of 1.5 formal courses focused on TFPD.
- No differences found in participation or in amounts of engagement by gender, race and ethnicity, citizenship, or discipline.
- Postdocs participate in TFPD at surprisingly high rates; no longer compulsory participation as during doctoral programs.
Year 5 survey revealed consistent significant differences in self-efficacy beliefs between postdocs and several other groups teaching in academia for virtually every item assessed.

Similarly, postdocs reported carrying out these teaching practices significantly less often than others teaching undergraduates; again, for most items.

We sought, then, to look within the postdocs to look for differences within postdocs based on their group characteristics:

- No gender differences.
- Asian and Asian American postdocs had significantly less confidence in all domains except staying current with subject matter.
- Instructor of record role only played role in classroom teaching self-efficacy.
Questions and Discussion
SELF-ASSESSMENT TOOL:
OVERVIEW

STEM College Teaching Proficiency Self-Assessment Tool

Introduction
This tool is designed to help educators of undergraduates in science, technology, engineering, and mathematics (STEM) settings assess their proficiency for performing certain teaching practices.

The tool contains three major elements:
1. Questions for completing the self-assessment.
2. Instructions for using the tool to assess professional development needs.
3. Sections in which teachers assess their current and desired proficiency for performing teaching practices.

The central, self-assessment element of the tool contains tasks organized around broad domains related to undergraduate STEM teaching. More information about the sources from which these domains and tasks were drawn can be found in the resources at the end.

Completing the Assessment
This self-assessment tool focuses on STEM college teaching proficiency, that is, the knowledge, skills, and attitudes that comprise a teacher’s capability to perform a given task. Teachers using this tool evaluate the level at which they perform certain teaching practices and identify any gaps between their current and desired proficiency. If gaps are found, teachers can plan for professional development or revision.

Using research and examples, we have specified four levels of teaching proficiency:
1. Novice: The teacher does not perform this practice or is not familiar with the task included below; this is a low level of performance.
2. Developing: The teacher sometimes performs this practice, and sometimes notices some limitations or shortcomings in performance. This is a middle level of performance.
3. Competent: The teacher performs this practice well and notices few limitations in performance. This is a high level of performance.
4. Expert: The teacher performs this practice as a habit and is at the level of a professional who is able to perform this practice in any student learning situation.

In the self-assessment sections, mark your current and desired proficiency levels for any of the teaching practices.

1. Identify gaps between your current and desired proficiency levels for any of the teaching practices.
2. Reflect on whether you need to address these proficiency gaps, and consider what factors influence that motivation. Examples of factors include professional growth, job satisfaction, increased teaching opportunities, and the satisfaction of your colleagues. Talk about your professional growth and goals when reviewing your motivations.
3. What steps would you take to address any teaching proficiency gaps? Each step should include identifying the steps you can take to work on the teaching proficiency gaps, making a plan for addressing the gaps, and setting realistic expectations for improvement.

We encourage you to use this tool to respond to only those items that are appropriate to your institution and discipline. Ask yourself: What tools do you currently use to support your professional development needs?
STEM College Teaching Proficiency Self-Assessment Tool

• Tool was developed from scales used in Year 3 and Year 5 LSFSS surveys
  • College teaching self-efficacy beliefs
  • College teaching behaviors
  • Reflection on teaching

• Identified a potential need for a tool like this give the differences we saw in teaching self-efficacy and teaching behaviors
  • Between postdocs and others teaching in academia (e.g., TT and NTT faculty)
  • Within their own group, by GENDER RACE INSTRUCTIONAL ROLE

• Also important given amount of teaching engagement during postdoc appointments
STEM College Teaching Proficiency Self-Assessment Tool

- Tool contains 3 major elements
  - Instructions for completing the self-assessment
  - Resources about TFPD for STEM college educators
  - Self-assessment sections about STEM college teaching practices

- Users should judge which sections and items are appropriate for them, respond accordingly
Understanding and Applying the Proficiency Theory of Adult Learning

- Tool is based on the *proficiency theory* of adult learning (Knox, 1981, 1990, 2003)
  - Proficiency is the capability to perform if given the opportunity
  - Comprised of one’s knowledge, skills, and attitudes

- Users of this tool can assess their current and desired proficiency
  - *Proficiency discrepancy*: identification of a *gap* between current and desired proficiency
  - Dependent on the context, professional needs and goals, and priority, a gap may motivate adult learning
  - When a gap of sufficient priority is identified and the adult learning is motivated to address it, they seek formal or informal professional development
  - Learners should develop an action plan to focus efforts and resources, evaluate success
Understanding and Applying the Proficiency Theory of Adult Learning

Current Teaching Proficiency
- Knowledge
- Skills
- Attitudes

The Gap: Proficiency Discrepancy

Desired Teaching Proficiency
- Knowledge
- Skills
- Attitudes

Motivation to Address Gap

Action Plan

SDL or CPD

Prior Gaps, Motivation, Action Plans
<table>
<thead>
<tr>
<th>CURRENT TEACHING PROFICIENCY</th>
<th>SECTION B: CLASSROOM TEACHING</th>
<th>DESIRED TEACHING PROFICIENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>At what level do you believe you can perform these teaching practices?</td>
<td>At what level would you like to perform these teaching practices?</td>
<td></td>
</tr>
<tr>
<td>Practice</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>applicable</td>
<td>Novice</td>
<td>Developing</td>
</tr>
<tr>
<td>1.1</td>
<td>I use a variety of teaching strategies to support learning.</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>I clearly communicate my expectations to students.</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>I actively engage students in learning activities.</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>I give students opportunities to build confidence in their abilities through practicing application of their skills.</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>I provide class activities in which students collaborate with each other.</td>
<td></td>
</tr>
</tbody>
</table>

Is there a gap between how well you can perform any of these teaching practices and how well you would like to perform them? Are some gaps more important to you than others? 

If so, are you motivated to address this gap? What factors influence this motivation for you? 

What actions could you take to improve your proficiency in teaching in the classroom? 

Other notes and comments:
### STEM College Teaching Proficiency Self-Assessment Tool

<table>
<thead>
<tr>
<th>CURRENT TEACHING PROFICIENCY</th>
<th>DESIRED TEACHING PROFICIENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>At what level do you believe you <em>can perform</em> these teaching practices?</td>
<td>At what level would you <em>like to perform</em> these teaching practices?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Not applicable</th>
<th>Novice</th>
<th>Developing</th>
<th>Competent</th>
<th>Expert</th>
</tr>
</thead>
</table>

**Section B: Classroom Teaching**

<table>
<thead>
<tr>
<th>PRACTICE DESCRIPTION</th>
<th>Not applicable</th>
<th>Novice</th>
<th>Developing</th>
<th>Competent</th>
<th>Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1. I use a variety of teaching strategies to support learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2. I clearly communicate my expectations to students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B3. I actively engage students in learning activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B4. I give students opportunities to build confidence in their abilities through practicing application of their skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B5. I provide class activities in which students collaborate with each other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
STEM College Teaching Proficiency Self-Assessment Tool

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a gap between how well you can perform any of these teaching practices and how well you would like to perform them? Are some gaps more important to you than others?</td>
<td></td>
</tr>
<tr>
<td>If so, are you motivated to address this gap? What factors influence this motivation for you?</td>
<td></td>
</tr>
<tr>
<td>What actions could you take to improve your proficiency in teaching in the classroom?</td>
<td></td>
</tr>
</tbody>
</table>
Small Group/Table Discussions

- Next 20 minutes to review the tool and answer the discussion prompts

- Steps for Discussion
  - *Nominate a facilitator* for your group
  - *Nominate a recorder* for your group
  - *Discuss* the four questions on the discussion handout
  - *Prepare* to share, either as a group or individually, main ideas, questions, comments
  - *Turn* in this worksheet at the end of the session

- Mark, Julia, and Lucas will float to tables during the discussion
Large Group Discussion

• Do you perceive a need for teaching development for postdocs, either nationally or institutionally?

• What might be some ways to address this unmet need, both institutionally and nationally?

• In what ways might the STEM College Teaching Proficiency Self-Assessment Tool be useful to postdoc scholars who care about undergraduate teaching?

• How can this tool be improved or adapted to better support postdocs who care about undergraduate teaching?
Final Questions and Comments

• Thank you for your participations and contributions to this workshop

• When you receive it, please fill out evaluation form emailed from the NPA
Contact Information and Materials

Julia Savoy	 insavoy@wisc.edu
Mark Connolly	 mrconnolly@wisc.edu
Lucas Hill	 hillluca@msu.edu
You-Geon Lee	 yglee@wisc.edu

Visit the study website to learn more: http://lsfss.wceruw.org/
To access a copy of our tools and slide presentation, please email: LSFSS@wcer.wisc.edu